Claims

We claim:

1. A system for controlling an endless drive member tension comprising:

a endless drive member having a drive member parameter;

a sensor detecting the drive member parameter and having a sensor signal;

a module for receiving the sensor signal from the sensor and for processing the sensor signal and for generating a control signal;

a moveable member receiving the control signal, whereby the moveable member movement adjusts a drive member tension.

2. The system as in claim 1, wherein the module comprises a control module having a computer processor.

3. The system as in claim 2, wherein:

the moveable member has an end connected to a fixed base and another end connected to a drive system component rotatably engaged with the drive member.

4. The system as in claim 3, wherein the sensor signal comprises an electric signal.

5. The system as in claim 3, wherein the moveable member comprises a hydraulic actuator.

6. The system as in claim 5, wherein the drive system comprises an accessory drive system for an engine.

7. The system as in claim 6, wherein the drive member parameter comprises a drive member tension.

8. A method of adjusting a drive member comprising the steps of:

sensing a drive member parameter;

generating a drive member parameter sensor signal;

transmitting a drive member parameter sensor signal to a control module;

processing the sensor signal

generating a control module signal;

transmitting a control module signal to an actuator;

energizing the actuator; and

adjusting a drive member parameter.

9. The method as in claim 8 further comprising the step of:

causing programmed instructions to control the control module.

10. A method of adjusting a drive member tension comprising the steps of:

sensing a drive member tension using a sensor;

generating a sensor signal;

processing the sensor signal;

generating a control signal;

transmitting the control signal to a moveable member; and

moving the moveable member to adjust a drive member tension.

11. The method as in claim 10 further comprising the steps of:

receiving a plurality of signals from a plurality of sensors;

processing the plurality of signals with the sensor signal to generate a control signal.

12. The method as in claim 11 further comprising the steps of:

moving the moveable member electrically.

13. The method as in claim 11 further comprising the step of:

moving the moveable member hydraulically.

14. The method as in claim 11 further comprising the step of:

moving the moveable member mechanically.

15. The method as in claim 11 further comprising the step of:

storing a programmed instruction in a memory for processing with the sensor signals.

16. The method as in claim 11 further comprising the steps of:

receiving the plurality of signals from a vehicle signal generator.

17. A method of preventing a drive member slip comprising the steps of:

sensing a drive member tension using a sensor;

generating a sensor signal;

processing the sensor signal to identify a drive member noise condition;

generating a control signal;

transmitting the control signal to a moveable member; and

moving the moveable member to adjust a drive member tension whereby a drive member slip is prevented.

18. The method as in claim 17 further comprising the steps of:

receiving a plurality of signals from a plurality of sensors;

processing the plurality of signals with the sensor signal to generate a control signal.

19. The method as in claim 18 further comprising the step of:

receiving the plurality of signals from a vehicle signal generator.

20. The method as in claim 19 further comprising the step of:

operating in a closed loop mode.

21. A method of adjusting an endless drive member comprising the steps of:

sensing a drive member tension;

sensing an engine parameter;

analyzing the drive member tension and the engine parameter;

computing a resultant;

adjusting a drive member tension according to the resultant.

22. The method as in claim 21, wherein the step of computing the resultant comprises:

processing using a computer processor.

23. The method as in claim 21 further comprising the step of:

comparing the drive member tension to a parameter stored in a memory device.

24. The method as in claim 21 further comprising the step of:

comparing the engine parameter to a parameter stored in a memory device.

25. The method as in claim 21 further comprising the step of:

receiving the drive member tension from a sensing member.

26. The method as in claim 21 further comprising the step of:

moving a rotating member engaged with the drive member to adjust a drive member tension.

27. The method as in claim 21 further comprising the step of:

training the drive member about at least two pulleys.

28. The method as in claim 21 further comprising the step of:

preventing a belt slip noise.

29. A method of adjusting an endless drive member to prevent a drive member slip comprising the steps of:

sensing a drive member tension;

analyzing the drive member tension with a system model;

computing a resultant;

adjusting a drive member tension according to the resultant.

30. The method as in claim 29 further comprising the step of:

sensing an engine parameter;

analyzing the engine parameter with the drive member tension to compute a resultant.

31. The method as in claim 30 further comprising the step of:

preventing a belt slip.

32. The method as in claim 30 further comprising the step of:

preventing a belt slip noise.

33. A method of preventing a belt slip comprising the steps of:

operating a drive having a belt engaged with a first accessory and a second accessory, said belt having a tension;

measuring a first accessory hubload, a second accessory hubload and a second accessory rotational speed;

calculating a first accessory slack side tension using a first accessory hubload, a second accessory hubload and a second accessory rotational speed;

detecting a first accessory load condition;

calculating a first accessory belt slack side tension using a first accessory load condition;

comparing a calculated first accessory belt slack side tension using a first accessory load condition to a calculated first accessory belt slack side tension using a first accessory hubload, a second accessory hubload and a second accessory rotational speed; and

adjusting a belt tension.

34. The method as in claim 33 further comprising the step of:

comparing the belt tension to a parameter stored in a memory device.

35. The method as in claim 33 further comprising the step of:

detecting a belt tension with a sensing member.

36. The method as in claim 33 further comprising the step of:

moving a rotating member engaged with the belt to adjust a belt tension.

37. The method as in claim 33 further comprising the step of:

training the belt about at least two pulleys.

38. The method as in claim 36 further comprising the step of:

preventing a belt slip.

39. The method as in claim 36 further comprising the step of:

preventing a belt noise.